

**REMARKS**

Claims 1 and 2 are pending in this application. By this Amendment, claim 1 has been amended to incorporate the subject matter of claim 3 and claims 3 and 4 have been canceled. No new matter is added. Claim 1 is independent. Reconsideration of the application is respectfully requested.

The Office Action rejects claims 1 and 3 under 35 U.S.C. §103(a) over PCT Publication No. WO 2001/023069 to Ohno et al. (Ohno) in view of U.S. Patent No. 6,673,414 to Ketcham et al. (Ketcham). The Office Action also rejects claims 2 and 4 under 35 U.S.C. §103(a) over Ohno and Ketcham and further in view of U.S. Patent Publication No. 2005/0138908 to Kasai et al. (Kasai). These rejections are respectfully traversed.

Independent claim 1 recites, *inter alia*, "the central portion has an additional filling percentage set within a range of 0.1 to 10 % to a total area of an end surface of each honeycomb segment at the inlet." The applied references fail to teach or render obvious the recited features of independent claim 1.

The Office Action acknowledges that Ohno and Ketcham fail to disclose that the central portion has an additional filling percentage set within a range of 0.1 to 10 % to a total area of an end surface of each honeycomb segment at the inlet. However, the Office Action alleges that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the reference to include the recited range, since discovering the optimum or workable range involves only routine skill in the art.

Section 2144.05.III. of the MPEP recites that applicants "can rebut a presumption of obviousness based on a claimed invention that falls within a prior art range by showing 'that there are new and unexpected results relative to the prior art.'"

When the central area has an additional filling percentage set within a range of 0.1 to 10 % to a total area of an end surface, the decrease of maximum temperature percentage is

significant while the pressure loss percentage is relatively small. For example, when the percentage of additional filling in the central portion is between 0.6 to 2.6, the decrease of the maximum temperature is between 5 and 23 % while the increase in the pressure loss is about 1 to 16 %. On the other hand, when the additional filling percentage in the central portion is less than 0.1, for example a 0 %, then there is 0 % decrease of the maximum temperature, which is undesirable. In addition, when the additional filling percentage is greater than 10, for example 10.5 %, the increase in the pressure loss is 95 %, which is also undesirable. See Table 1 and Fig. 6 of the specification. Thus, there are significant advantages when the central portion has an additional filling percentage set within the range of 0.1 to 10 %. Accordingly, due to the unexpected results relative to the prior art, when the central portion has an additional filling percentage set within the recited range, it is not obvious with respect to Ohno and Ketchum. Kasai fails to cure the deficiencies of Ohno and Ketchum. Accordingly, the applied references, alone or in any combination, fail to teach or render obvious the recited features of independent claim 1.

Dependent claim 2 is patentable at least due to its dependence on allowable independent claim 1 and for the additional features it recites.

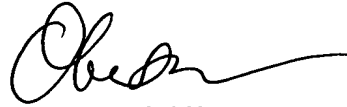
Accordingly, withdrawal of the rejections of the claims is respectfully requested.

#### **I. Conclusion**

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1 and 2 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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